CLAIMS

1. A process for producing and/or repairing very fine tips made from a photostructurable material on a carrier, in particular for utilization in scanning probe microscopy, characterized in that

Sub a3

- the carrier is positioned on an exposure mask whose exposure section correlates to the tip to be produced or repaired,
- the photostructurable material is applied onto the exposure mask and/or the carrier,
- an exposure of the photostructurable material occurs via the exposure mask
- in a manner known per se, the exposed photo-structurable material is hardened and the unexposed material removed, and
- the carrier with the tip and the exposure mask are separated from one another.

2. The process according to claim 1, characterized in that the exposure occurs in a directed manner, in particular in a direction diagonal or inclined towards the tip.

3. The process according to claim 2, characterized in that the exposure occurs at an angle of approximately 30° to a perpendicular line in relation to the exposure mask and/or to the surface of the carrier.

4. The process according to claim 1, characterized in that the tip to be produced or repaired is positioned on top of the exposure mask.

5. The process according to claim 1, characterized in that prior to the directing of the carrier a small amount of the photostructurable material is applied onto the exposure mask so that the carrier adheres to the latter.

6. The process according to claim 1, characterized in that a separation layer is provided for a facilitated separation of the carrier having the tip from the exposure mask.

7. The process according to claim 1, characterized in that preferably SU-8 is used as the photosensitive resist and that the so-called spin coating is used for its application.

8. The process according to claim 1, characterized in that the exposure mask is preferably made from quartz and the exposure section provides the tip with a radius of less than 1 µm, preferably approximately 0.7 µm.

9. The process according claim 1, characterized in that the shape and section of the exposure mask and/or the exposure angle are selected such that a tip develops having a predetermined radius and/or edge angle.

10. A process for producing and/or repairing very fine tips made from a photostructurable material on a carrier, in particular for utilization in scanning probe microscopy, comprising

- providing a multitude of carriers positioned on a wafer in an undivided manner,

- arranging an exposure mask provided with a multitude of exposure sections positioned correspondingly,

- applying said photostructurable material onto said exposure mask and/or said carriers,

- conducting a simultaneous, inclined or diagonal exposure of all said provided carriers on said wafer via said exposure mask, hardening said exposed photostructurable material and removing any unexposed photostructurable material, and

- separating said exposure mask from the wafer.

11. A probe, particularly for use in scanning probe microscopy, characterized in that a tip made from a hardened photosensitive resist is produced and/or mounted laterally at or on a carrier preferably comprising a semiconductor or quartz material, in particular forming the cantilever of a scanning probe microscope.

12. The probe according to claim 11, characterized in that the tip is made and/or mounted from photosensitive

resist by means of a process known per se from the production of semiconductors, in particular subsequent to the production of the carrier.

13. Use of a tip produced according to claim 1 in a scanning probe microscope, in particular for the examination of so-called soft specimen and/or in a vacuum or at low pressure.

14. Use of a probe embodied according to claim 11 in a scanning probe microscope, in particular for the examination of so-called soft specimen and/or in a vacuum or at low pressure.